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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,779	05/09/2001	Ritsu Kawase	50233-093	9162

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600 13th Street NW  
Washington, DC 20005-3096

EXAMINER
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LIN, TINA M

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/070,779

Applicant(s)

KAWASE ET AL.

Examiner

Tina M Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-18 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office action is responsive to applicant's communication filed on 07 May 2003.

Corrections of the minor informalities are noted by the Examiner.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,832,149 to Omizu et al. in view of U.S. Patent 5,582,673 to Burack et al. and in further view of U.S. Patent 4,546,018 to Ryuzo et al. Omizu et al. discloses a connecting apparatus with a plurality of optical fibers in a two dimensional plane and a protective layer of tape. But, Omizu et al. fails to disclose a protective resin layer used to hold the optical fibers in place. However, Omizu et al. does disclose a set of v-grooves, along with a pressing member, to hold the optical fibers in place. On the other hand, Burack et al. discloses a protective resin layer that is bonded to a flat member or base that is pressed against the optical fibers for supporting each optical fiber in its assigned position. Therefore, since both Omizu et al. and Burack et al. disclose methods of holding optical fibers in place, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used the method disclosed by Burack et al. for the same purpose of holding optical fibers in place in place of the method disclosed by Omizu et al. Omizu et al. also fails to disclose protective resin layer bonded to a base or another protective layer via an adhesive layer. Burack et al. on the other hand does disclose a protective layer or

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sheet that is bonded by an adhesive. Since the protective layer is used disclosed by Burack et al. and Omizu et al. are both used for the same purpose of protecting the optical fibers, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used an additional adhesive layer to securely join the base of another layer with the protective layer. Additionally, it is well known in the art to use an acrylic pressure –sensitive adhesive in optical fiber interconnects. Therefore, it would have been obvious as the time the invention was made to a person having ordinary skill in the art to have used an acrylic pressure-sensitive adhesive as the adhesive used to bond the layers together. Furthermore, Omizu et al. fails to mention the material for the protective resin layer to be a silicone-base material curable through a condensation reaction with liberation of an oxime or liberation of an alcohol. However, Ryuzo et al. does disclose a silicone base resin curable through a reaction with the liberation of alcohol or oxime. Ryuzo further discloses that these materials can be used for coatings of various substrates and compositions. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have specified a specific material, silicone-based material curable through a condensation reaction with liberation of an oxime or alcohol, for the protective resin layer. And since all these layers are being held together by adhesive layers, it can be observed from Burack's figures and it would have also been obvious at the time the invention was made to a person having ordinary skill in the art to have seen a stacked structure formed. Lastly, Omizu et al. fails to disclose a protective resin layer comprising of an adhesion promoter. However, the use of adhesion promoters with adhered optical components is well known in the art, therefore, it would have been obvious at the time

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the invention was made to a person having ordinary skill in the art to have used a protective resin layer comprising an adhesion promoter.

***Allowable Subject Matter***

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 6 discusses a protective resin layer comprising of an adhesion promoter with a specific compound formula that is not suggested or disclosed by the prior art.

Claims 7-18 are allowed. The prior art of record does not suggest or reasonably disclose a protective resin layer formed from a silicone-based material curable by crosslinking through a hydrosilation reaction and an adhesion promoter or an adhesive layer comprising a silicone-based pressure sensitive adhesive curable by crosslinking through a hydrosilation reaction. The closest prior arts of record are U.S. Patent 5,832,149 to Omizu et al. and U.S. Patent 5,582,673 to Burack et al. In combination, Omizu et al. and Burack et al. discloses a two dimensional connecting apparatus with protective resin layers joined together by adhesive layers and bonds. However, neither Omizu et al. or Burack et al. mention, disclose or suggest either material specified by the applicant to be used in the protective resin layer or the adhesive layer. Additionally, U.S. Patent 5,539,013 to Eckberg et al. does discuss the method of pre-crosslinking and crosslinking materials through a hydrosilation reaction, but Eckberg et al. does not disclose or reasonably suggest a reason to use this method in a silicone-based pressure sensitive adhesive.

Applicant's arguments filed 07 May 2003 have been fully considered but they are not persuasive. In regards to claim 1, applicant argues Omizu et al. does not teach the optical fibers to be fixed by a protective resin but are merely temporarily retained. However, in claim 1,

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applicant states the optical fibers are just “held in place”. Although Omizu et al. does not disclose the optical fibers are permanently held in place by the protective resin layer, the claim language also does not suggest the optical fibers are permanently held in place. Applicant additionally argues Burack et al. holds the optical fibers in place on a substrate by sandwiching them between two flexible films as opposed to embedding the optical fibers in their entirety in the protective resin layer. Examiner agrees with the applicant that Burack et al. does not disclose or suggest the optical fibers to be completely embedded in their entirety. However, in argument is does not agree with the claim language. In claim 1, applicant claims that the optical fibers are held in place by the protective resin layer, not embedded in their entirety. Applicant also argues Ryuzo et al. fails to disclose the curable silicone modified resin coating composition to be used as a protective resin layer. However, Ryuzo et al. does disclose to use of the coating to coat substrates or silicon materials with a “super adhesive strength”. (Column 1) Since Ryuzo et al. discloses the coating can be placed over a substrate, such as the one disclosed by Omizu et al. and Burack et al., the protective resin layer can be formed from a silicon-base material curable through a condensation reaction with liberation of an oxime or liberation of alcohol.

Additionally, Examiner agrees with Applicant the protective resin layer does not completely embed the optical fibers. The prior art of record fails to disclose or reasonably suggest embedding the optical fibers in a protective resin layer composed of a silicone-base curable material curable through a condensation reaction with liberation of an oxime or liberation of alcohol. Therefore, if Applicant amended claim 1 by replacing “held in place” with “embedded in their entirety”, the application would be in condition for allowance.

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**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

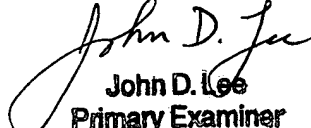
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M Lin whose telephone number is (703) 305-1959. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TML   
July 2, 2003

  
John D. Lee  
Primary Examiner